What Is Claimed Is:

1. A pressure sensor having a diaphragm (1), which is differently deformable or locally changeable by pressure differences,
wherein at least one functional section (1.1) of the diaphragm (1) has a material which has the properties of a black-body radiator or has an emissivity essential for detection in the spectral radiation range corresponding to the temperature of the diaphragm (1) under its conditions of use, and
a radiation receiver unit, which detects at least a portion of the emitted radiation, having at least one infrared radiation sensor (4), is assigned to the diaphragm (1).

2. The pressure sensor as recited in Claim 1,
wherein the functional section (1.1) is positioned in a central area of the diaphragm (1) and is implemented by a coating with the material, and
the functional section (1.1) is surrounded by a section (1.2) which has a lower emissivity at least in the radiation range corresponding to the temperature of the diaphragm (1) under the conditions of use.

3. The pressure sensor as recited in Claim 1 or 2,
wherein the functional section (1.1) is coated with carbon black, iron oxide, oxidized copper, or oxidized steel, and/or
the surrounding section (1.2) bears a gold plating.

4. The pressure sensor as recited in one of the preceding claims,
wherein an infrared conductor (2), which is transparent

at least in the spectral radiation range corresponding to the conditions of use of the pressure sensor, is positioned between the radiation receiver unit and the diaphragm (1).

5. The pressure sensor as recited in Claim 4, wherein the infrared conductor (2) has a tubular section having a treated inner wall surface for guiding the infrared radiation emitted by the diaphragm (1) and/or the infrared conductor (2) has a dielectric waveguide for guiding the infrared radiation emitted by the diaphragm (1).

6. The pressure sensor as recited in Claim 5, wherein the infrared conductor (2), if it is implemented as having a tubular section, bears a smooth surface having a roughness smaller than the relevant wavelengths and a coating reflecting at least most of the infrared radiation of the diaphragm (1) or the infrared conductor (2), if it is implemented as having a waveguide, is made of germanium, sapphire, quartz, calcium fluoride, or sodium chloride.

7. The pressure sensor as recited in one of Claims 4 through 6, wherein the infrared conductor (2) has lens elements.

8. The pressure sensor as recited in one of the preceding claims, wherein the infrared radiation sensor (4) has its radiation sensitivity tailored to the infrared radiation of the diaphragm (1), and the radiation receiver unit is adapted to the oscillation frequency of the diaphragm (1).

9. The pressure sensor as recited in one of the preceding claims,
wherein the infrared radiation sensor (4) has a pyroelectric detector, a bolometer, or a thermopile.

10. The pressure sensor as recited in one of the preceding claims,
wherein a cooling device (5) is assigned to the infrared radiation sensor (4) and/or
an infrared filter for selecting a radiation band relevant to the measurement is connected upstream from the infrared radiation sensor (4).

11. The pressure sensor as recited in one of the preceding claims,
wherein the radiation receiver unit has two infrared radiation sensors (4), upstream from which infrared filters of different spectral transparencies are positioned and
an analysis unit is implemented in such a way that the radiation components detected by the two infrared radiation sensors (4) are separated into the components originating from deflections of the diaphragm (4) and the components originating from temperature changes of the diaphragm (4).